

# Reactive Power Service

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# Purpose

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- ◆ Importance of reactive service to National Grid
- ◆ Feedback on reactive market trends
- ◆ What are tender assessment principles
- ◆ Raise awareness of Enhanced reactive service

# Importance of reactive service to National Grid

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- ◆ Provides ability to raise and lower local voltage profile
  - ◆ Licence obligations for limits
  - ◆ System stability – system security
- ◆ Locational service
- ◆ If it can be metered and utilised/despatchable – National Grid will pay for it (economics permitting)

# Importance of reactive service to National Grid

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- ◆ Unlike frequency, not homogeneous – voltage varies across system
- ◆ Similar to system constraints
  - ◆ has locational value
  - ◆ but MVAR unwillingness to travel narrows the location
- ◆ National Grid can provide own reactive capability through capital investment to meet design standards

# Importance of reactive service to National Grid

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- ◆ Transmission assets
  - ◆ Synchronous compensators
  - ◆ Capacitive and inductive compensators
  - ◆ Static VAr Compensators
  - ◆ Less controllable – Overhead Lines, cables, transformers
- ◆ Market providers
  - ◆ Mandatory minimum Grid Code requirement for Generators
  - ◆ Enhanced Grid Code capability

# Feedback on reactive market trends

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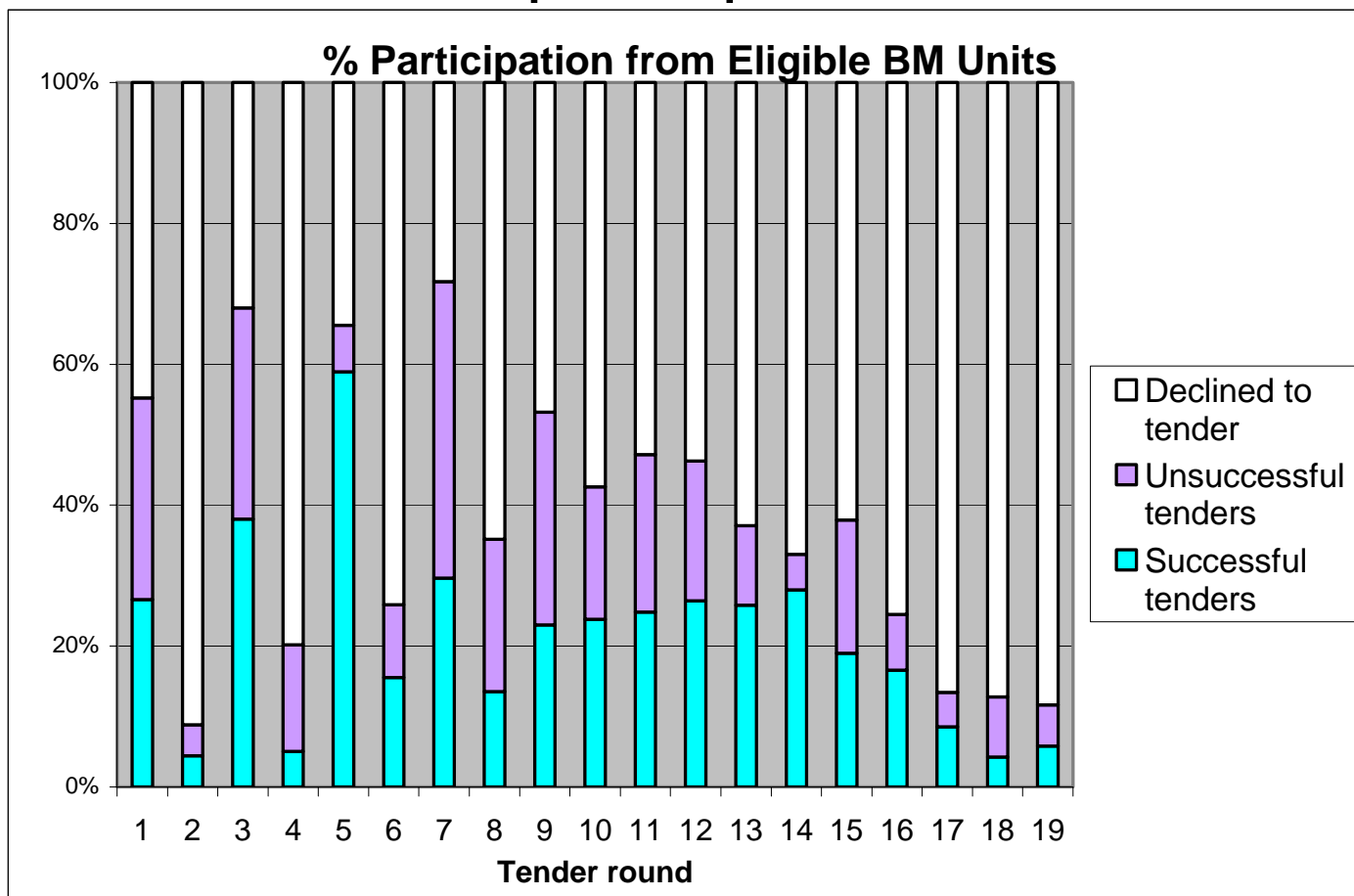
- ◆ Default payment arrangements
  - ◆ payment for utilisation only on £/MVArh basis
  - ◆ 50% weighting power price index and 50% weighting RPI
    - CAP45 1<sup>st</sup> April 2004
- ◆ Market payment arrangements
  - ◆ allows for availability payments
  - ◆ allows payment for Enhanced reactive capability
  - ◆ opens service to other eligible providers

# Feedback on reactive market trends

	Pros	Cons
<b>Default Payment Mechanism (DPM)</b>	<ol style="list-style-type: none"> <li>1. Prices might go up higher than expected</li> <li>2. No tender process</li> </ol>	<ol style="list-style-type: none"> <li>1. No firm income</li> <li>2. Prices may go lower than expected</li> </ol>
<b>Reactive Market</b>	<ol style="list-style-type: none"> <li>1. Firm capability income</li> <li>2. Fixed utilisation prices</li> <li>3. Potential higher utilisation</li> <li>4. Assessment recognises more than prices</li> <li>5. Allows flexible pricing for utilisation</li> <li>6. Route to market for enhanced capability</li> <li>7. Open to providers with no Grid Code requirement</li> </ol>	<ol style="list-style-type: none"> <li>1. Tender documentation to complete</li> <li>2. No payments for failure to provide contracted service (Default Payment Mechanism pays 20%)</li> </ol>

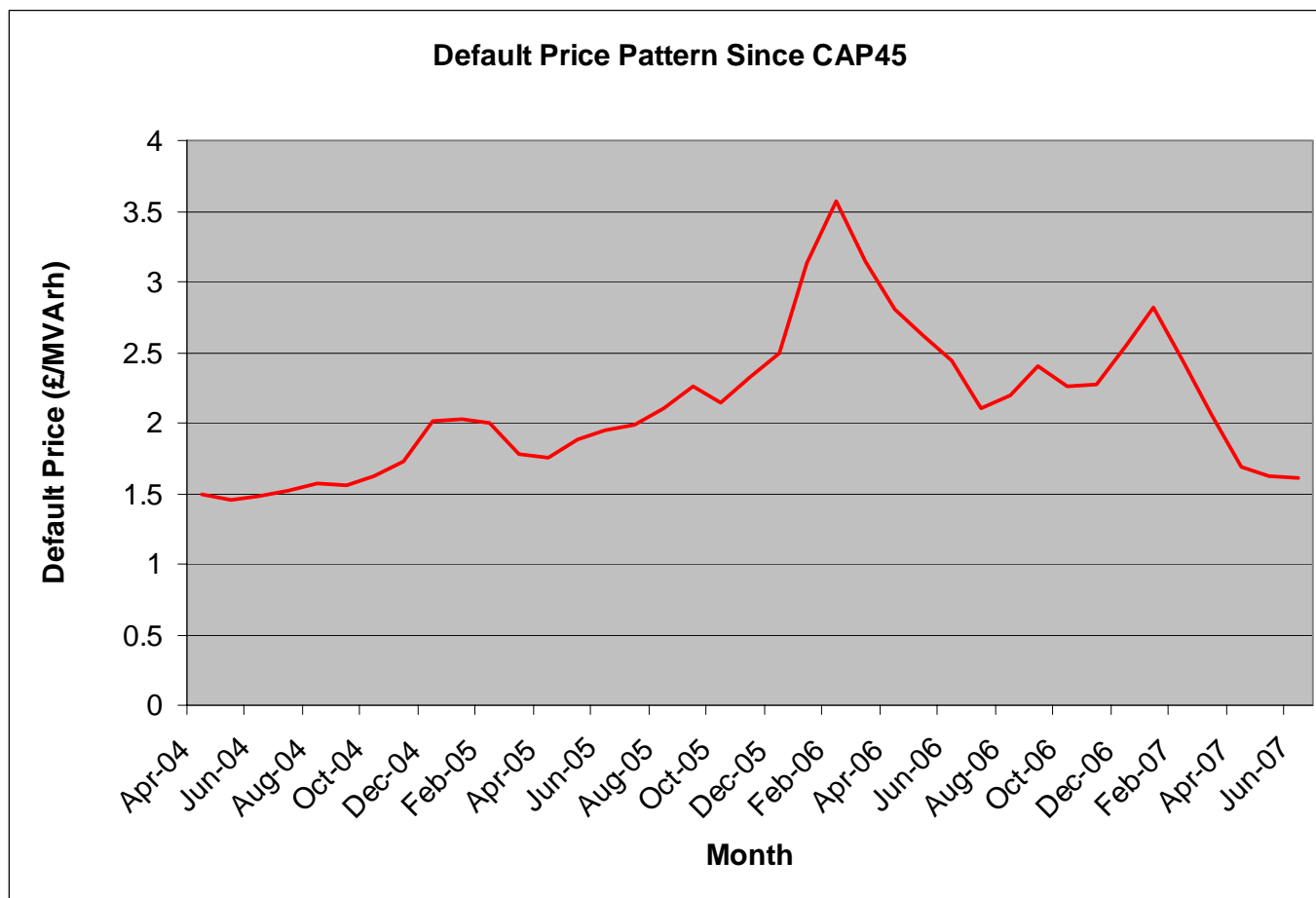
# Feedback on reactive market trends

## ◆ Decrease in tender participants



# Feedback on reactive market trends

- ◆ Prices no longer rising – no tender increase



# What are tender assessment principles

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- ◆ Minimum 12 month duration, 6 month increments
- ◆ 2 tender rounds each year
  - ◆ 1 April & 1 October Contract Start Dates
  - ◆ Tender Pack at least 8 weeks before Market Day
  - ◆ Tender Acceptance 10 weeks from Market Day
  - ◆ Contract Start at least 6 weeks from Tender Acceptance
- ◆ Market report available
- ◆ Providers have ability not to sign

# What are tender assessment principles

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- ◆ Detailed in schedule 3 of CUSC and includes
  - ◆ Hedge against forecast costs under Default Payment Mechanism
  - ◆ Locational and effectiveness value
  - ◆ Interaction with other tenders
  - ◆ Historic and forecast utilisation
  - ◆ Forecast of savings in constraints
  - ◆ Expected availability and quality of capability
  - ◆ Rejected tender – move back to Default Payment Mechanism (if mandatory provider)

# Enhanced Reactive Service

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- ◆ Available to National Grid through tender
- ◆ Where no Grid Code requirement
- ◆ Opens market to alternative providers/technologies
  - ◆ Currently minimal interest – why?

# Reactive Service Moving Forward

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- ◆ Consider options for existing market arrangements
  - ◆ Feedback of why market participation is falling would be useful
- ◆ Promotion of Enhanced for existing and new connectees
- ◆ Clearer signals for provision of Enhanced?
- ◆ BSSG looking at reactive procurement

# Reactive Power Service

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Further questions?

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